Vale District Bureau of Land Management
Squaw Creek Riparian Management
Harper Allotment (00301)
Environmental Assessment
EA No. OR-030-03-013

Finding of No Significant Impact

Riparian monitoring data gathered in recent years indicate that current livestock management actions implemented within Simmons Gulch Pasture of Harper Allotment (00301) are contributing to a failure to meet riparian management objectives. The Malheur Resource Area of the Bureau of Land Management, Vale District has analyzed a number of alternatives to allow recovery of these riparian resources. Alternatives analyzed include a proposed action to exclude cattle grazing from Simmons Gulch Pasture of Harper Allotment for five years between March 2004 and February 2009 to allow riparian vegetation recovery in the absence of grazing and browsing impacts from cattle. In addition, the analysis included exclusion fencing, fall grazing, and a no action alternatives.

Impacts to critical elements of the human environment, including ten points of significance identified in 40 CFR 1508.27(b), are not determined to be in excess of limits requiring the development of an environmental impact statement. Negative impacts to desired perennial vegetation communities and thus watershed stability are not anticipated with implementation of the proposed action.

As a result, on the basis of the information contained in this environmental assessment and all other information available, it is my determination that the proposed action does not constitute a major federal action significantly affecting the quality of the human environment and that an environmental impact statement is not required.

/s/ Tom Dabbs
Tom Dabbs
Field Manager
Malheur Resource Area

2-12-2004
Date

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1 Purpose of and Need for Action

Squaw Creek, within Harper and Butte Allotments, was identified as providing riparian and fish habitat values within the 1983 Southern Malheur Grazing Management Program Environmental Impact Statement and subsequent decision to implement management decisions within the1984 Southern Malheur Rangeland Program Summary (RPS). Decisions to manage public land resources adjacent to Squaw Creek to provide for improvement/maintenance of riparian values, wildlife habitat, and fish habitat was carried forward within the 2002 Southeastern Oregon Resource Management Plan Record of Decision, the current land use plan for Malheur and Jordan Resource Areas, Vale District. Squaw Creek and other stream riparian resources within Simmons Gulch Pasture of Harper Allotment have been managed with spring only grazing by livestock since implementation of the RPS. A location map of Squaw Creek is provided with figure 1.

The present boundaries of Harper Allotment were defined in 1994 with implementation of the Harper Cooperative Agreement dated 11/14/1994 between livestock operators and the Bureau of Land Management (USDI-BLM Vale District, 1994). The agreement divided Red Hills Allotment from Harper Allotment, provided for the construction of a number of livestock management fences, implemented interim and final grazing schedules for each allotment, reduced active authorizations of livestock grazing, and stipulated a number of terms and conditions of grazing authorizations to better meet resource management objectives. One term and condition of the agreement states, "A maximum allowable use limit on willows within riparian communities of Lake Ridge, Shearing Plant, and Simmons Gulch pastures is 30% of the total number of leaders produced during the most recent growing season." The final grazing schedule for Simmons Gulch Pasture, which was implemented in 1998 following the construction of Rufino Butte Division Fence, is as follows:

Year 1 (1999, 2002, 2005, ---)	4/1 to 6/15
Year 2 (2000, 2003, 2006, ---)	Rest
Year 3 (2001, 2004, 2007, ---)	4/1 to 5/15

Monitoring of riparian woody vegetation utilization has been periodically completed adjacent to two reaches of Squaw Creek since implementation of the 1994 Harper Cooperative Agreement. One riparian woody utilization transect was established on the North Fork of Squaw Creek beginning slightly upstream of the Simmons Gulch / South Racehorse pasture division fence and proceeding upstream approximately one-half mile. A second riparian woody utilization transect was established on the South Fork of Squaw Creek beginning at Stringer Spring and proceeding downstream to the Squaw Creek Reservoir Enclosure fence. The locations of each of these transects is identified in figure 2. A summary of recent riparian shrub utilization measurements for these two transects follows:

Riparian Reach	Date	Measured Utilization	Reported Cattle Use
North Fork Squaw Creek	May 26, 1995	< 1%	4/1 to 4/29
	July 6, 1999	43%	4/2 to 6/20
	Sept. 18, 2000	70%	Scheduled rest, trespass occurred
	June 1, 2001	49%	4/1 to 5/29
	June 18, 2002	62%	4/1 to 6/19
	August 26,2003	33%	Scheduled rest
South Fork Squaw Creek	May 26, 1995	0%	4/1 to 4/29
	July 6, 1999	39%	4/2 to 6/20
	June 1, 2001	42%	4/1 to 5/29
	June 18, 2002	63%	4/1 to 6/19
	August 26, 2003	15%	Scheduled rest

These utilization data indicate nearly consistent utilization of woody riparian species in excess of established limits adjacent to Squaw Creek in recent years. Monitoring photos at established photo points on the North Fork and South Fork Squaw Creek show very slow recovery of riparian woody vegetation occurring within Simmons Gulch Pasture with current spring livestock use as implemented. Although willow and mock-orange shrubs are numerous on each of the cut banks of each stream reach, few are

escaping excessive browsing, as is documented in the table above and in long term riparian photo monitoring. In the absence of maintaining woody species utilization levels below established limits, it is unlikely that riparian resource management objectives identified in the land use plan and cooperative agreement will be met. These data indicate that livestock management actions, as currently implemented, are contributing to the measured high utilization levels.

Riparian vegetation recovery along Squaw Creek within South Racehorse Pasture, immediately downstream of Simmons Gulch Pasture, has progressed significantly in the past fifteen years and longer, as can be evidenced in long term photo monitoring. Similarly, observed riparian vegetation recovery along the South Fork Squaw Creek within Squaw Creek Reservoir Exclosure has continued to occur in recent years. The potential to support woody and herbaceous riparian species along the cobbled streambed of the North and South Forks of Squaw Creek in Simmons Gulch Pasture is similar to that potential in South Racehorse Pasture and Squaw Creek Reservoir Exclosure. An extreme fence-line contrast in willow height and density has existed on both forks of Squaw Creek between Simmons Gulch and South Racehorse pastures for at least the past fifteen years. South Racehorse Pasture is grazed annually between April 1 and May 15, although livestock do not tend to concentrate in riparian areas as they do in the lower reaches of Squaw Creek in Simmons Gulch Pasture.

Additionally, upland utilization monitoring at established sites adjacent to Squaw Creek in Simmons Gulch Pasture has been recorded as heavy (61-80%) on native perennial bunchgrasses in 1999, 2001 and 2002. Utilization measured along the total utilization transect in those years were 51% in 1999, 20% in 2001, and 35% in 2002. The established utilization limit for native grasses was established as 50% in the Southern Malheur Rangeland Program Summary and carried forward in the Southeastern Oregon Resource Management Plan, pending the establishment of site specific limitations. Planned establishment and implementation of site specific upland utilization limits was identified in the land use plan to be completed as determined necessary during the geographic management area assessment and activity planning process.

2 Alternatives Including the Proposed Action

Livestock operators authorized to graze livestock within Simmons Gulch were contacted between July 2002 and March 2003 to advise them of continued problems with recorded utilization levels on woody vegetation adjacent to the North and South Forks of Squaw Creek. Operators met again with BLM on January 30, 2004. Possible livestock management actions were discussed. This section describes the proposed action, alternatives, and the no action alternative which resulted from discussions with livestock operators and discussions between BLM staff members. Alternatives such as closing Simmons Gulch Pasture to livestock grazing permanently and implementation of a deferred rotation grazing schedule which included mid-summer use were considered but not analyzed as described in section 2.5.

2.1 Proposed Action

Past experiences, where livestock have been excluded from riparian areas depleted of herbaceous and/or woody vegetation for a period sufficient to allow shrubs to become established and grow to a height above the reach of cattle and to a density with sufficient woody vegetation capable of sustaining some livestock use, have proven successful for riparian recovery (USDI-BLM Vale District Office 1996, USDI-BLM Montana State Office 1997, USDI-BLM 1997, USDI-BLM Montana State Office 1998, USDI-BLM 2000). Many of these examples have included the successful reintroduction of conservative livestock use and maintained an upward trend in riparian communities, once recovery is initiated with the rest period.

The proposed action is to exclude livestock from grazing within Simmons Gulch Pasture for five years (March 2004 through February 2009) while maintaining the current grazing schedule within remaining pastures of Harper Allotment. Animal Unit Months (AUMs) of authorized grazing within Harper Allotment during this five year period would be reduced consistent with previously authorized levels of grazing in Simmons Gulch Pasture identified in the established grazing schedule. The grazing schedule and terms of use of riparian vegetation communities in Simmons Gulch Pasture identified in the 1994 Cooperative Agreement would be resumed in 2009 with permitted active levels of grazing authorization.

As a result, the following grazing schedule and authorized active use would be implemented in Harper Allotment during the next five years, returning to permitted levels in 2009:

Year	*Pasture*	*Season of use*	*Active Use*	
2004	Simmons Gulch	Rest	Palmer	1756 AUMs
	Shearing Plant	Rest	Palmer lease	566 AUMs
	Indian Camp	5/16 to 7/31	Hidden Valley	511 AUMs
	Rufino Butte	8/1 to 10/31	Coleman	889 AUMs
2005	Simmons Gulch	Rest	Palmer	1434 AUMs
	Shearing Plant	6/16 to 6/30	Palmer lease	463 AUMs
	Rufino Butte	7/1 to 8/30	Hidden Valley	417 AUMs
	Indian Camp	9/1 to 10/31	Coleman	726 AUMs
2006	Simmons Gulch	Rest	Palmer	2224 AUMs
	Shearing Plant	4/1 to 5/15	Palmer lease	806 AUMs
	Rufino Butte	5/16 to 7/31	Hidden Valley	661 AUMs
	Indian Camp	8/1 to 10/31	Coleman	1121 AUMs
2007	Simmons Gulch	Rest	Palmer	1756 AUMs
	Shearing Plant	Rest	Palmer lease	566 AUMs
	Indian Camp	5/16 to 7/31	Hidden Valley	511 AUMs
	Rufino Butte	8/1 to 10/31	Coleman	889 AUMs
Year	*Pasture*	*Season of use*	*Active Use*	
2008	Simmons Gulch	Rest	Palmer	1434 AUMs
	Shearing Plant	6/16 to 6/30	Palmer lease	463 AUMs
	Rufino Butte	7/1 to 8/30	Hidden Valley	417 AUMs
	Indian Camp	9/1 to 10/31	Coleman	726 AUMs
2009	Return to 1994 Cooperative Agreement Final Schedule		Palmer	2224 AUMs
			Palmer lease	806 AUMs
			Hidden Valley	661 AUMs
			Coleman	1121 AUMs

Since spring/summer sheep use has not been identified as causing impairment to riparian recovery, the authorized use by one sheep operator would not be changed beyond a condition of the authorization excluding herders from allowing sheep to graze in the lower drainages of Squaw Creek within Simmons Gulch Pasture.

2.2 Exclusion Fencing Alternative

A temporary livestock exclusion fence would be constructed to rest those portions of Simmons Gulch Pasture which include the North and South Forks of Squaw Creek for five years. The exclusion fencing alternative would require the construction of approximately 3.75 miles of temporary electric fence to exclude livestock from the vicinity of the North and South Forks of Squaw Creek for five years between March 2004 and February 2009. An approximation of the fence location is presented in figure 3. An estimated 5,500 acres of upland vegetation, in addition to the riparian communities, would be excluded from livestock use to provide for removal of cattle impacts to the North and South Forks of Squaw Creek. Sheep use would also be excluded from the exclosure to avoid impacts to riparian resources and damage to the temporary fence which may subsequently allow cattle access to the excluded area. Livestock operators would be responsible for maintenance of temporary fencing to ensure that livestock are excluded from riparian communities as planned. Active levels of grazing use and the final grazing schedule for Harper Allotment implemented with the 1994 Cooperative Agreement would be maintained (see section 3.5).

2.3 Fall Grazing Alternative

The fall grazing alternative would revise the 1994 Cooperative Agreement final grazing schedule to shift the annual period of cattle grazing use in Simmons Gulch Pasture to fall, consistent with the current duration of use planned annually. Thus, the following schedule would be implemented with no change in authorized levels of cattle grazing use in Harper Allotment:

Year	*Pasture*	*Season of use*
2004	Shearing Plant	Rest
	Indian Camp	4/1 to 6/15
	Rufino Butte	6/16 to 9/15
	Simmons Gulch	9/16 to 10/31

Year	*Pasture*	*Season of use*
2005	Shearing Plant	4/1 to 4/15
	Rufino Butte	4/16 to 6/15
	Indian Camp	6/16 to 8/15
	Simmons Gulch	8/16 to 10/31
2006	Shearing Plant	4/1 to 5/15
	Rufino Butte	5/16 to 7/31
	Indian Camp	8/1 to 10/31
	Simmons Gulch	Rest
2007	Shearing Plant	Rest
	Indian Camp	4/1 to 6/15
	Rufino Butte	6/16 to 9/15
	Simmons Gulch	9/16 to 10/31
2008	Shearing Plant	4/1 to 4/15
	Rufino Butte	4/16 to 6/15
	Indian Camp	6/16 to 8/15
	Simmons Gulch	8/16 to 10/31
2009	Return to 1994 Cooperative Agreement Final Schedule	

Since spring/summer sheep use has not been identified as causing impairment to riparian recovery, the authorized use by one sheep operator would not be changed.

2.4 No Action Alternative

The no action alternative would continue the implementation of the 1994 Cooperative Agreement final grazing schedule and active levels of livestock use in Harper Allotment, with planned spring use by cattle in two of every three years in Simmons Gulch Pastures (see section 3.5). Sheep use would continue to be authorized for spring and summer grazing. Protection of riparian woody species would be dependent on livestock operators herding cattle from riparian areas adjacent to the North and South Forks of Squaw Creek to avoid use of woody species in excess of the established 30% limit.

2.5 Alternative Considered, Though not Analyzed

Permanent exclusion of cattle grazing from Simmons Gulch was considered in the Proposed Southeastern Oregon Resource Management Plan / Final Environmental Impact Statement within alternative D2. Analysis of this alternative, which proposed livestock exclusion from Simmons Gulch Pasture to protect

relevant and important values of Lake Ridge Area of Critical Environmental Concern / Research Natural Area, as well as redband trout strongholds and habitat for sagegrouse, did not indicate that permanent livestock exclusion was necessary to enhance and maintain riparian function and meet associated resource management objectives. Appropriate rest and recovery time, followed by conscientious livestock management which limits utilization levels and seasons of use when livestock concentrate within riparian communities, was found to potentially meet management objectives, while continuing to authorize livestock use.

Implementation of a deferred rotation grazing schedule which includes mid-summer use of Simmons Gulch Pasture, and thus hot-season use of riparian areas adjacent to the North and South Forks of Squaw Creek by cattle, was also considered, but not analyzed. A number of reviews of riparian grazing literature indicate that next to season-long grazing, livestock use during the hot mid-summer season is generally the most detrimental to riparian vegetation resources (USDI-BLM Montana State Office 1997, UDSI-BLM/USDA-FS 1997, USDI-BLM Montana State Office 1998, USDI-BLM 2001). As a result, change of planned grazing from spring only, a preferred season of livestock use to protect and enhance riparian resources, to mid-summer use is not an alternative worthy of further consideration.

3 Affected Environment

This section presents relevant resource components of the existing environment which constitute baseline information.

3.1 Vegetation, Soils and Watershed

Vegetation in Simmons Gulch Pasture, as well as the majority of Harper Allotment, consists of shrub steppe plant communities dominated by sagebrush species and bunchgrasses. The vegetation type which covers the majority of the allotments is dominated by Wyoming big sagebrush (*Artemisia tridentata ssp wyomingensis*) with an understory of perennial grass species, primarily bluebunch wheatgrass (*Pseudorogneria spicata*), Sandberg bluegrass (*Poa secunda*), Thurber's needlegrass (*Stipa thurberiana*), basin wildrye (*Leymus cinereus*) and cheatgrass (*Bromus tectorum*). Depleted rangelands adjacent to historic livestock concentration areas have a higher density of annual species and reduced dominance by perennial species. Microbiotic crusts composed of cyanobacteria, green algae, lichens, mosses, microfungi, and other bacteria occupy many open spaces between higher plants where they have not been depleted by past impacts.

The soils found in the area of the EA were surveyed and described in Oregon's Long Range Requirements for Water 1969, Appendix I-10, Malheur Drainage Basin.

Three mapping units occur in this area. This first mapping unit occurs on the lower end of North and South Fork Squaw Creeks. This unit is 60-94 on slopes ranging from 3 to 12 percent. Seventy percent of this unit is made up Unit 60 soils on slopes of 7 percent or greater. The rest of the unit is made of Unit 94 soils which are raw sediments on slopes of 3 to 12 percent. These sediments are exposed along incised drainages.

Unit 60 soils are moderately fine textured, well drained soils underlain by old lacustrine sediments. They occur on gently sloping to hilly uplands. Native vegetation consists mostly of big sagebrush, rabbitbrush, bluebunch wheatgrass, and Sandberg bluegrass.

Unit 94 is a miscellaneous land unit consisting of gently sloping to moderately steep raw old lake sediments where active erosion has prevented soil formation. Vegetative cover is very sparse.

The second mapping unit is 96-75 soils on very steep slopes ranging from 35 to 60 percent. This unit is rock land with 30 percent Unit 76 soils on 20 to 60 percent slopes. Unit 75 soils occur on rolling plateaus. These soils occur in the middle of both of the Squaw Creek drainages.

Unit 96 is a miscellaneous land unit called Rock Land. It consists of rough, steeply sloping areas that are predominantly shallow, very stony soils interspersed with rock outcroppings. Steep Rock land occurs mainly as canyons and escarpments along margins and dissected portions of lava plateaus. These areas are mainly used for wildlife and watershed purposes.

Unit 75 soils are loamy, shallow, very stony, well drained soils over basalt, rhyolite, or welded tuff. They occur on gently undulating to rolling lava plateaus and some very steep faulted and dissected terrain. Native vegetation consists mostly of big sagebrush, low sagebrush, bluebunch wheatgrass, and Sandberg bluegrass.

The third mapping unit is 76-84 soils on slopes ranging from 20 to 60 percent. This unit is approximately 70 percent Unit 76 soils and 30 percent Unit 84 soils. These soils occur on the higher areas of the Squaw Creek drainages.

Unit 76 soils are shallow, clayey, very stony, well drained soils over basalt, rhyolite, or welded tuff. These soils occur on gently undulating to rolling lava plateaus and some very steep faulted and dissected terrain. Native vegetation consists mostly of big sagebrush, low sagebrush, bluebunch wheatgrass, and Sandberg bluegrass.

Unit 84 soils are very shallow, very stony, rocky, well drained soils over basalt, rhyolite, or welded tuff. They occur on gently undulating to rolling plateaus and very steep canyon lands and escaprments. Native vegetation consists mostly of low sagebrush, Idaho fescue, bluebunch wheatgrass, Sandberg bluegrass, and juniper.

The North and South Forks of Squaw Creek drain north from an elevation of 5200 feet near Tims Peak to 2600 feet at the Malheur River in the Lower Malheur River subbasin (17050117). The Malheur River drains east into the Snake River and subsequently to the Columbia River and the Pacific Ocean.

3.2 Noxious Weeds

Scotch thistle (*Onopordum acanthium*), an aggressive biennial, dominates a small acreage at a number of locations within Harper Allotment, especially adjacent to roads and other areas of previous disturbance. Whitetop or hoary cress (*Cardaria spp.*), another perennial noxious weed is also present, especially adjacent to roads and other routes of seed distribution. Medusahead wildrye (*Taeniatherum caput-medusae*), an aggressive annual grass, is present at limited sites with clay layers present in the soil. Perennial pepperweed (*Lepidium latifolium*), an aggressive, long-lived perennial, is present adjacent to a number of streams, especially Malheur River. Russian knapweed (*Acroptilon repens*), a deep rooted long-lived perennial, occurs in limited locations. Noxious weed distribution in the allotment is more significant at lower elevation within areas of greater historic livestock impacts. Noxious weed presence is sparse in areas dominated by healthy perennial species.

Additionally, Russian olive (*Elaeagnus angustifolia*), Chinese elm (*Ulmus sp.*), and salt cedar (*Tamarix ramosissima*) are present within the riparian vegetation communities of the North and South Forks of Squaw Creek.

3.3 Special Status Plants

No plant species listed or proposed for listing under the Endangered Species Act of 1973 are known to be present in the vicinity of Squaw Creek. Habitats known to support Malheur fiddleneck (*Amsinkia carinata*), a special status plant species which is listed by the State of Oregon as Threatened, are present adjacent to the Crowley Road, East of Squaw Creek. Similarly, Malheur prince's plume (*Stanleya confertifola*) is found in ash habitat adjacent to the Crowley Road. Habitat which supports these species is not found in the vicinity of Squaw Creek or Simmons Gulch Pasture. No further analysis of impacts to special status plants will be completed in this environmental assessment.

3.4 Riparian Values

The primary management objectives to improve riparian habitat adjacent to springs and streams which were identified in the Southeastern Oregon Resource Management Plan, was to achieve proper functioning condition, attain water quality standards, and to provide suitable habitat for desirable terrestrial and aquatic species. Water developments, fencing, and implementation of appropriate livestock grazing schedules are expected to result in a more even distribution of livestock into upland vegetation communities, with fewer animals around perennial streams and resulting in improved water quality. No wetlands other than riparian communities associated with streams, springs, and constructed reservoirs are present within Harper Allotment. A complete list of riparian vegetation species currently present or potentially present adjacent to Squaw Creek has not been developed. Woody species utilization adjacent to Squaw Creek has included measurement of willows, mock orange, and rose. Few of these shrubs have grown to their potential heights beyond the reach of browsing animals. A variety of sedges and rushes, in addition to grasses and forbs, are present in the herbaceous layer.

3.5 Livestock Grazing

Harper Allotment is located southwest of Harper, Oregon and was part of the Skull Springs Management Unit during development of the Southern Malheur Rangeland Program Summary in the mid-1980's. With the completion of the Southeastern Oregon Resource Management Plan in 2002, Harper Allotment was included in the Mainstem Malheur Geographic Management Area. Boundaries of the allotment are approximately defined by US Highway 20 to the north, the Crowley road and Keeney Creek to the east, the source of Keeney Creek, Rufino Butte, and Tims Peak to the south, and Sperry Creek to the west. Pastures within the allotment and acreage of each are as follow:

Pasture	Acres
Simmons Gulch	26,392
Shearing Plant	10,205
Rufino Butte	9,692
Indian Camp	10,455
Shearing Plant Stock Driveway	512

The Harper Cooperative Agreement was implemented in 1995 which defined terms and conditions of livestock management practices implemented to protect public land resources. The 58,302 acre allotment (95% federal) is currently divided into 5 managed pastures. A number of small enclosures/exclosures are also present. Four livestock operators are authorized to graze cattle or sheep within the allotment between April 1 and October 31 annually. Palmer Ranch, Hidden Valley Ranch Partnership, and Michael and Casey Coleman graze cattle, while Frank Shirts Grazes sheep. Palmer Ranch is authorized to graze 2224 AUMs annually with an additional 806 AUMs authorized as a result of a lease of private land belonging to Verda Palmer. Hidden Valley Ranch Partnership is authorized to graze 661 AUMs annually, while Michael and Casey Coleman are authorized to graze 1121 AUMs annually. The Cooperative Agreement final grazing schedule for cattle is as follows:

Year	*Pasture*	*Season of use*
Year 1 (2002, 2005, etc.)	Simmons Gulch	4/1 to 6/15
	Shearing Plant	6/16 to 6/30
	Rufino Butte	7/1 to 8/30
	Indian Camp	9/1 to 10/31
Year 2 (2003, 2006, etc.)	Simmons Gulch	Rest
	Shearing Plant	4/1 to 5/15
	Rufino Butte	5/16 to 7/31
	Indian Camp	8/1 to 10/31
Year 3 (2004, 2007, etc.)	Simmons Gulch	4/1 to 5/15
	Shearing Plant	Rest
	Indian Camp	5/16 to 7/31
	Rufino Butte	8/1 to 10/31

Frank Shirts is authorized to graze 545 AUMs annually with sheep. Sheep grazing is managed by herders and is not restricted by identified pasture boundaries, although the 1994 Cooperative Agreement states, "Sheep use will occur primarily in upland vegetation communities of Lake Ridge and Simmons Gulch pastures, with trailing use only authorized in Rufino Butte (Rufino Butte and Indian Camp) and Red Butte (Red Hills and Cherry Creek) pastures.

As noted in the purpose and need section of this environmental assessment, the majority of cattle use made within Simmons Gulch Pasture occurs within the lower reaches of Squaw Creek, with minor use radiating out to the upper reaches of Squaw Creek, onto the bench adjacent to Tims Peak, and within the drainages of Simmons Gulch, Gold Creek, and Sperry Creek. Sheep use within Simmons Gulch Pasture occurs primarily at the upper elevation sites on the bench adjacent to Tims Peak, with lesser use at lower elevations.

Assessment of rangeland standards and guidelines in accordance with 43 CFR 4180, as well as the evaluation of progress toward meeting resource objectives with current management actions, is planned within the Mainstem Malheur River Geographic Management Area, including Harper Allotment, during FY 2005.

3.6 Wildlife and Fish

Harper Allotment includes year-long and summer only range for mule deer and pronghorn antelope. Elk also make limited seasonal use. Other wildlife species found in the area include neotropical migratory song birds, small mammals and reptiles.

No known wildlife species listed as threatened or endangered under the Endangered Species Act of 1973 are present within or adjacent to Harper Allotment. Bureau Sensitive, Assessment, and Tracking species which may use habitats available in Harper Allotment include western toad, feruginous hawk, loggerhead shrike, western burrowing owl, western sage grouse, Yuma myotis, desert horned lizard, Mohave black-collared lizard, and northern sagebrush lizard. Little information is currently available on numbers and distribution of these species.

Habitats within Harper Allotment supporting sage grouse include those supporting leks, nesting and brood rearing. Sage grouse are seasonally present in a number of the pastures with three known lek sites on the plateau between Tims Peak Reservoir and the sources of the North and South Forks of Squaw Creek. Two of these leks, located in the upper reaches of the South Fork of Squaw Creek, near Roy and McCloud reservoirs, are within five miles of the north fork utilization transect and even closer to the south fork utilization transect. Current recommendations for management of sage grouse breeding habitat (lek attendance, nesting, and early brood rearing) include the retention of grasses and forbs greater than seven

inches in height and 25 percent canopy cover during spring (Connelly et al 2000). Dobkin (1995) identified the critical role of early brood habitat in maintaining sage grouse populations.

Redband/rainbow trout (*Oncorhynchus mykiss ssp*) occur in both forks of Squaw Creek, where pools and lower water temperatures provide some refuge through most of the year.

3.7 Recreation and Visual Resources

Dispersed outdoor recreation in and near Harper Allotment consists primarily of occasional off highway vehicle use within designated open areas, fishing, and the hunting of upland birds and big game animals. Some dispersed general sightseeing occurs. The public land portion of the allotment is within visual resource management (VRM) Class I (Camp Creek Wilderness Study Area), II (Malheur River Canyon), III and IV areas. The objective of each class is as follows:

- Class I is to preserve the existing character of the landscape. This class provides for natural ecological changes, and it allows limited management activity. The level of change should be very low and must not attract attention. Class I is assigned to those areas where a management decision has been made to preserve a natural landscape. This includes areas such as wilderness, the wild sections of Wild and Scenic Rivers, and other Congressionally and administratively designated areas.
- Class II is to retain the existing character of the landscape. The level of change to landscape characteristics should be low. Management activities may be seen but should not attract the attention of a casual observer. Any change must conform to the basic elements of form, line, color, and texture in the predominant natural features of the characteristic landscape.
- Class III is to partially retain the existing character of the landscape. Moderate levels of change are acceptable. Management activities may attract attention but should not dominate the view of a casual observer. Changes should conform to the basic elements of the predominant natural features of the characteristic landscape.
- Class IV is to provide for management activities that require major modification of the landscape. These management activities may dominate the view and become the focus of viewer attention. However, every effort should be made to minimize the impact of these projects by carefully locating activities, minimizing disturbance, and designing the projects to conform to the characteristic landscape.

3.8 Wilderness Study Areas

The Squaw Creek area was inventoried for wilderness values in accordance with the Federal Land Policy and Management Act of 1976. Within the Oregon Wilderness Environmental Impact Statement (December 1989), the 13,600 acre Gold Creek Wilderness Study Area, in addition to the adjoining Camp Creek, Corttonwood Creek, and Sperry Creek WSAs, was recommended suitable for designation as wilderness. Pending congressional action relative to designation or release, the area continues to be managed in accordance with the Interim Management Policy for Lands Under Wilderness Review. The reaches of Squaw Creek of concern due to heavy livestock use are outside the boundaries of Wilderness Study Areas although a significant portion of Simmons Gulch Pasture is within Camp Creek, Gold Creek, and Sperry Creek Wilderness Study Areas (figure 1).

3.9 Cultural Resources

Native American peoples, prior to European contact, were extremely well adapted to their environment. The subsistence economy was strongly oriented toward gathering and collecting because plant foods were more abundant and dependable than fowl, fish or mammals. Mammals provided skins, furs, tools and many other by_products of aesthetic and practical value. Insects were often eaten. Beetles, grasshoppers, locusts, crickets, ants and caterpillars were consumed, as well as most eggs and larva. Historic documents indicate that several hundred plants were used by the Indians of the Great Basin for medicinal purposes, fiber sources and food. The Native people of the Great Basin, who practiced the ancestral lifeways into the

19th century were heirs to an extremely ancient cultural tradition with a technology both effective and efficient, with many multi-functional, light-weight and expendable tools.

Exploration into this area during the Historic period began with the expeditions of John Jacob Aster, after he heard the stories from the Lewis and Clark Expedition of 1804-1806. The first written observations of southeastern Oregon can be found in journals kept by men involved in the expansion of fur trapping territory. Trapping occurred along the major and minor tributaries in the area: Owyhee, Snake, Malheur, North Fork Malheur and South Fork Malheur Rivers. The era of the fur trade provided the basis for American families to travel west. For Native Americans, increased use of the Oregon Trail burdened grazing resources, killed off game, and displaced resident bands.

The Malheur Reservation located north of Juntura covered 1,778,560 acres and extended east almost to Westfall. The Reservation was established at Fort Harney in 1872, to contain "all the roving and straggling bands" in southeastern Oregon after the ending of hostilities in 1868. However, the area was only occupied between 1871 and 1878 when, through a series of circumstances, groups abandoned the locality to participate in the Bannock War of 1878. Those who participated in the war and some who did not were interned for several years on the Yakima Reservation. On May 21, 1883, the president issued an order restoring to the public domain the Malheur Reservation except 320 acres on which the old military post of Camp Harney stands. The reservation went on the market and was sold to Euro-American livestock ranchers in 1883.

Surveys for cultural resources have been limited to areas where surface disturbing activities have been proposed. These surveys have located both prehistoric and historic cultural resources which reflect the uses of this landscape over time. Prehistoric and historic use of this area has been documented by the presence of artifacts and through oral history. Prehistoric sites are mainly lithic scatters and camp sites associated with springs and water sources. Historic use of the area is evident by the presence of solder top cans, old whiskey bottles, artifacts which reflect the use of this landscape for sheep and cattle ranching, as well as the oral history of families still living in the areas settled by their fore-fathers.

3.10 Areas of Critical Environmental Concern

Lake Ridge Area of Critical Environmental Concern/Research Natural Area (ACEC/RNA), located on the plateau of Simmons Gulch Pasture adjacent to Tims Peak and the source of the North and South Forks of Squaw Creek, was designated within the SEORMP based on its representation of the low sagebrush/bluebunch wheatgrass and low sagebrush/Idaho fescue vegetation cells identified by the Oregon Natural Heritage Program. Additionally, sage grouse, which frequent the area, and several leks have been identified as relevant and important values.

The alternatives are anticipated to not significantly affect this ACEC/RNA positively or negatively, due to its location relatively distant from riparian resources associated with Squaw Creek and the condition of vegetation resources for which the ACEC/RNA was designated. Livestock exclusion from Simmons Gulch Pasture, the proposed action, would result in no planned livestock use and reduced impacts within a portion of the ACEC/RNA. No further analysis of impacts to the ACEC/RNA will be completed.

3.11 Climate/Topography

Harper Allotment is composed of rolling hills and steep talus slopes where the elevation above sea level ranges from approximately 2600 feet at the north allotment boundary adjacent to Malheur River to 5200 feet elevation near Tims Peak. Riparian areas of concern adjacent to the North and South Forks of Squaw Creek are between 3000 and 3400 feet elevation. Semi desert shrub steppe vegetation communities result from cold winters and hot dry summers. The long term average annual precipitation is between ten and twelve inches, dependent on elevation, aspect, and typical storm tracks. Precipitation occurs primarily as snow fall during the winter with occasional mid-summer thunder storms. Climate and topography would not be affected by the proposed action, alternatives, or the no action alternative. No further analysis of climate or topography will be completed.

3.12 Other Mandatory Elements

The following mandatory elements are either not present or would not be affected by the proposed action or alternatives:

- Air Quality
- Water Quality
- Native American Religious Concerns
- Hazardous Wastes
- Prime or Unique Farmlands
- Wetlands/Flood Plains
- Environmental Justice
- Actions to Expedite Energy Related Projects (Executive Order No. 13212 of May 18, 2001)

These elements will not be further analyzed within this environmental assessment.

4 Environmental Consequences

This chapter is organized by alternatives to illustrate the differences between the proposed action, alternatives, and the no action alternative.

4.1 Proposed Action

Consequences of implementing the proposed alternative; exclusion of livestock grazing from Simmons Gulch Pasture of Harper Allotment for five years between March 2004 and February 2009, would result as summarized in the following sections.

4.1.1 Vegetation, Soils and Watershed

Proposed exclusion of livestock from Simmons Gulch Pasture for five years would remove heavy spring livestock grazing impacts from the portion of the pasture adjacent to Squaw Creek and light to moderate spring livestock grazing impacts from the remainder of the pasture. A summary of impacts of seasons and intensities of grazing impacts to vegetation resources is presented in Appendix R of the Proposed Southeastern Oregon Resource Management Plan and Final EIS.

Impacts to soils and watershed values would be reduced as a result of reduced livestock hoof compaction of soils and increased residual litter, especially adjacent to Squaw Creek and other portions of Simmons Gulch Pasture which typically receive moderate to heavy livestock use during scheduled grazing.

4.1.2 Noxious Weeds

Removal of livestock grazing from Simmons Gulch Pasture for five years would also remove one source of potential dispersal of weed seed, short term. Additionally, restoration and maintenance of riparian function to those portions of Squaw Creek currently heavily used by livestock would result in more stable stream banks and reduction in the number of sites available for weed establishment at cut banks and at points of deposition downstream, especially reducing sites of potential establishment of Russian olive, Chinese elm, and salt cedar. Similarly, long term improvement in the health of native perennial upland vegetation, resulting from five years of rest, would reduce sites for weed establishment.

4.1.3 Riparian Values

As identified in the purpose and need section of this environmental assessment, alternative actions are identified to resolve the failure of current livestock management actions to meet riparian management objectives for the North and South Forks of Squaw Creek. Exclusion of livestock from Simmons Gulch Pasture, including identified reaches of Squaw Creek, would allow recovery of riparian vegetation species from past livestock impacts and the opportunity for desirable woody species to attain a density and height which may allow the reintroduction of appropriate livestock use. A number of authors have identified the consequences of various seasons and intensities of livestock use as identified in the purpose and need

section of this document and also within Appendix R of the Southeastern Oregon Resource Management Plan and Record of Decision. Heavily utilized riparian communities generally are provided the best opportunity for recovery of woody and herbaceous species with livestock exclusion. The literature also identifies the benefits of short term (approximately five years) of exclusion followed by restoration of conservative use. Spring use, when upland communities are more palatable and when livestock water is available at sites in addition to riparian areas, is generally the most conducive for maintenance or recovery of riparian resources, when livestock grazing is authorized.

Opportunities to further refine livestock management practices, upon the return of livestock to the pasture or in the event that implemented livestock management practices are found to limit meeting management objectives, would not be forgone with the implementation of five years of exclusion between 2004 and 2009. Reintroduction of the established grazing schedule for Simmons Gulch Pasture in the 1994 Cooperative Agreement or some other schedule deemed necessary to meet objectives would remain as available options.

4.1.4 Livestock Grazing

Established levels of livestock grazing use within Harper Allotment would be reduced in four of the five years between 2004 and 2009, resulting in the need for operators to find alternative sources of spring forage and/or reduce livestock numbers. The reduction in authorized cattle use within Harper Allotment, occurring during spring turnout, would be 21 percent in 2004, 36 percent in 2005, 0 percent in 2006, 21 percent in 2007, and 36 percent in 2008. Seasons of livestock use and implementation of grazing schedules defined within the 1994 Cooperative Agreement would be unchanged with the exception of livestock exclusion from Simmons Gulch Pasture. Livestock operators would continue to be responsible for the implementation of the established grazing schedule with the added exclusion of livestock from Simmons Gulch Pasture for five years. Fence maintenance to ensure compliance with established schedules would continue as identified in existing cooperative agreements for projects.

4.1.5 Wildlife and Fish

Impacts to wildlife habitat resources which have occurred in recent years from upland utilization adjacent to Squaw Creek and light to moderate utilization in the remainder of Simmons Gulch Pasture would be reduced with livestock exclusion for five years. A summary of the types of impacts to wildlife habitat values is presented in Appendix F of the Proposed Southeastern Oregon Resource Management Plan and Final EIS. Restoration and enhancement of the woody riparian component, as well as the herbaceous component, adjacent to the North and South Forks of Squaw Creek and other riparian vegetation communities within Simmons Gulch Pasture, would benefit wildlife and fish by providing improved riparian habitat and indirect benefits to aquatic habitats.

4.1.6 Recreation and Visual Resources

Recreation values would be little changed by the proposed exclusion of cattle from Simmons Gulch Pasture, with the exception of indirect long term improvement of wildlife habitat values resulting in improved hunting opportunity and restoration of the natural setting of healthy riparian vegetation communities.

Visual impacts resulting from proposed short term exclusion of livestock from Simmons Gulch Pasture would be consistent with the management objectives for VRM Classes I, II, II, and IV. Visual impacts of heavy livestock use of riparian communities adjacent to the North and South Forks of Squaw Creek and adjacent upland vegetation communities would be reduced short term during the exclusion period and be moderated with the reintroduction of appropriate livestock use following five years of livestock exclusion.

4.1.7 Wilderness Study Areas

Wilderness values would be little changed by the proposed exclusion of cattle from Simmons Gulch Pasture. Any ongoing livestock impacts to wilderness values resulting from authorized livestock use would be eliminated during the five year period between 2004 and 2009.

4.1.8 Cultural Resources

No Class III cultural resource survey would be required to exclude livestock short term from Simmons Gulch Pasture. Any ongoing livestock impacts to historic or prehistoric cultural resources within Simmons Gulch Pasture resulting from authorized livestock use would be eliminated during the five year period between 2004 and 2009.

4.2 Exclusion Fencing Alternative

Consequences of constructing approximately 3.75 miles of temporary fencing and exclusion of livestock from an estimated 5,500 acres adjacent to the North and South Forks of Squaw Creek for five years, would result as summarized in the following sections.

4.2.1 Vegetation, Soils and Watershed

Exclusion of livestock from approximately 5,500 acres in the vicinity of the lower reaches of Squaw Creek in Simmons Gulch Pasture would be similar to those benefits to upland vegetation resources identified in the proposed alternative, although the benefits would not extend to the boundaries of Simmons Gulch Pasture. It is probable that current livestock use which occurs in the lower reaches of Squaw Creek would be shifted primarily to the upper reaches of Squaw Creek and onto the bench adjacent to Tims Peak. In addition to increased utilization levels in the upper portion of the Squaw Creek watersheds, installation and removal of temporary fencing would result in direct impact to native vegetation communities dominated by shrub steppe vegetation communities as materials are transported to and from the site of construction and from construction activities. Indirect impacts to vegetation communities would also be intensified adjacent to the temporary fence as livestock drift toward accustomed areas of use in the North and South Forks of Squaw Creek.

Impacts to soils and watershed values may be relocated to portions of Simmons Gulch Pasture other than the Squaw Creek drainages since cattle use would be relocated to other drainages. The potential for localized soil compaction in areas adjacent to new grazing and loafing areas is anticipated to be increased as livestock use is relocated.

4.2.2 Noxious weeds

Ground disturbance and dispersal of noxious weeds and undesirable species is anticipated to be somewhat changed with proposed construction of temporary fencing and associated change in livestock use patterns during scheduled grazing of Simmons Gulch Pasture. Traffic and ground disturbance during construction, maintenance, and removal of temporary fencing would slightly increase risk for dispersal of weed seed and other undesirable plant materials along roads and routes of access as well as the area of project construction, providing sites for new weed establishment. The anticipated increase in noxious weed presence or dominance due to temporary fence construction or maintenance is small with limited cumulative consequences when added to existing threats. The need for surveys and treatment of sites invaded by these species would only change slightly.

4.2.3 Riparian Values

Benefits from livestock exclusion from the Squaw Creek drainages identified in analysis of the proposed alternative would also be realized with temporary fencing to exclude cattle from these areas. The potential for displacement of livestock impacts from the North and South Forks of Squaw Creek to riparian communities adjacent to Simmons Gulch, Gold Creek, and other streams which remain available for livestock use as scheduled in the 1994 Cooperative Agreement would be great.

4.2.4 Livestock Grazing

Established levels of livestock grazing use within Simmons Gulch Pasture and the remainder of Harper Allotment would be unchanged with exclusion of cattle from the Squaw Creek drainages. Although

livestock would be removed from approximately 5,500 acres of the 26,392 acre Simmons Gulch Pasture, utilization levels recorded in recent years indicate that the remaining available portions of Simmons Gulch could support authorized livestock numbers during scheduled periods of use. Seasons of livestock use and implementation of grazing schedules defined within the 1994 Cooperative Agreement would be unchanged. Livestock operators would continue to be responsible for maintenance of projects identified in rangeland improvement cooperative agreements and be responsible for implementation of livestock management actions in compliance with terms and conditions of grazing authorizations. Livestock operators would assume maintenance responsibility for temporary fencing constructed to protect riparian communities adjacent to Squaw Creek.

Livestock management actions required to implement the existing grazing schedule in Simmons Gulch Pasture would be greater than recently has been put forth, due to the added distance from remaining pastures of the allotment and rough topography of the portions of Simmons Gulch outside the Squaw Creek drainages. Additional livestock management actions would be required to ensure that cattle do not concentrate adjacent to the temporary fence and to comply with the exclusion of livestock from the lower reaches of Squaw Creek in Simmons Gulch Pasture.

4.2.5 Wildlife and Fish

Benefits to wildlife and fish habitats adjacent to the lower reaches of Squaw Creek would be similar to those notes in analysis of the proposed action, with cattle excluded from those drainages for five years. Improvement of riparian habitats adjacent to Squaw Creek and reduced utilization levels in adjacent uplands excluded from cattle use would benefit wildlife and fish habitats.

Negative impacts to wildlife would be somewhat increased as a result of direct impacts of constructing the proposed temporary fencing to exclude cattle from Squaw Creek drainages and from increased utilization levels in the upper drainage of Squaw Creek and the remainder of the pasture. The potential for wildlife entanglement in temporary fencing would be increased.

Sage grouse have complex life histories and often require large home ranges to survive. Other than the location of leks, there is little information in BLM files concerning sage grouse habitat use in this allotment, although it is probable that nesting and brood rearing occurs within the vicinity of leks at Roy and McCloud reservoirs. Both of these reservoirs would remain available for livestock use and are located adjacent to the proposed temporary fence, likely resulting in significant increased levels of utilization by livestock. The recommended minimum seven inches of grass and forb height in sage grouse breeding habitat would likely not be maintained with the anticipated concentration of cattle resulting when they are displaced from the lower reaches of Squaw Creek.

Proposed construction of temporary fence is not anticipated to significantly affect sage grouse habitat quality negatively or positively other than indirectly through the exclusion of livestock from riparian vegetation communities which may improve associated meadow communities associated with springs and their habitat quality. Fences can increase accidental injury and death should sage grouse fly into them when approaching or leaving riparian communities or leks.

4.2.6 Recreation and Visual Resources

Recreation values would be little changed by the proposed exclusion of cattle from the Squaw Creek drainages, with the exception of indirect long term improvement of wildlife habitat values resulting in improved hunting opportunity and restoration of the natural setting of healthy riparian vegetation communities.

Visual impacts resulting from temporary fence construction, maintenance, and removal and proposed short term exclusion of livestock from the Squaw Creek drainages would be consistent with the management objectives for VRM Class IV, within which the length of the fence would be located. Visual impacts of heavy livestock use of riparian communities adjacent to the north and south forks of Squaw Creek and adjacent upland vegetation communities would be reduced short term during the exclusion period and be moderated with the reintroduction of appropriate livestock use following five years of livestock exclusion.

4.2.7 Wilderness Study Areas

Since the length of temporary fence considered would be outside WSA and cattle would be excluded from the lower portion of Squaw Creek drainage, an area outside WSA, wilderness values would not be affected directly by fence construction or livestock exclusion. Although the season of use of WSA portions of Simmons Gulch Pasture would be unchanged, indirect impacts to wilderness values would likely occur from the increased intensity of livestock use within WSA as a result of displaced cattle from the excluded portion of the pasture. This change in intensity of livestock use within WSA would likely be localized in portions of Gold Creek WSA adjacent to the proposed temporary fence and where livestock water is available in streams and reservoirs.

The Interim Management Policy for Lands Under Wilderness Review, provides opportunity for changes in grazing within WSA when the effects are found to be negligible. Changes cannot cause unnecessary or undue degradation of the lands. The assessment of the proposal must include an evaluation of the effects on the following parameters and wilderness values:

- the natural ecological condition of the vegetation.
- the visual condition of the lands and waters.
- erosion.
- changes in the number of natural diversity of fish and wildlife.
- all wilderness values.

Displacement of livestock from the current area of concentrated use in the lower drainage of Squaw Creek, an area of approximately 5,500 acres within the 26,292 acre pasture, to the remainder of Simmons Gulch Pasture which is primarily within WSA, would likely exceed the above parameters, at least in localized areas. Although not analyzed completely, examples where maximum acceptable impacts would likely be exceeded with implementation of this alternative include:

- The maximum allowable impacts to naturalness and solitude include negligible or no noticeable impact to the presence and distribution of wildlife. Similarly, the maximum allowable impacts to wildlife habitat, population estimates, or diversity is no negative impact. As noted in section 4.2.5, a decline in sage grouse breeding habitat adjacent to two leks, both within Gold Creek WSA, would likely result in a decline in local populations.
- The maximum allowable impacts to vegetation include utilization levels of 50 percent, healthy vigorous plants, and static trend. As noted in section 4.2.1, utilization levels adjacent to the proposed fence and within Gold Creek WSA would increase, potentially resulting in declining grass and forb vigor and downward trend.

4.2.8 Cultural Resources

A Class III cultural resource survey of the area of the considered temporary fence would be conducted prior to project initiation. Impacts to cultural values would be avoided or mitigated by design changes or facilities placement. Any ongoing livestock impacts to historic or prehistoric cultural resources within the Squaw Creek drainage resulting from authorized livestock use would be eliminated during the five year period between 2004 and 2009.

4.3 Fall Grazing Alternative

Consequences of implementing the fall grazing alternative; revise the 1994 Cooperative Agreement final grazing schedule to shift the annual period of cattle grazing in Simmons Gulch Pasture to fall, would result as summarized in the following sections.

4.3.1 Vegetation, Soils and Watershed

The grazing schedule implemented in 1995 for Harper Allotment placed an effort to graze upland vegetation communities no more than one in three years during the active growing season, May 1 to July 1. Repeated grazing use of desired perennial species during the period when plants are actively growing and soil moisture is becoming depleted leads to a reduction in the plants carbohydrate reserves for regrowth and long term health. The considered change to fall use of Simmons Gulch Pasture would exceed the tool of

no more than one of three years use during the growing season by removing all growing season use. The cost of this action is the transfer of additional late growing season (June) use to Rufino Butte and Indian Camp pastures. Within the last allotment evaluation, it was determined that the carrying capacity of these two pastures was the primary limitation to carrying capacity when added to constraints for other resource values, primarily riparian and associated values, in what is now Harper Allotment. As a result, one can expect upland vegetation health and vigor to decline with implementation of fall use of Simmons Gulch Pasture. With the decline of upland vegetation health and vigor comes increased soil surface exposure leading to reductions in soil stability and a decline in watershed stability.

During years lacking fall precipitation and green-up of vegetation, one would anticipate cattle to congregate in areas of Simmons Gulch most familiar to them and closest to their trail home to winter feedlots. Those areas would likely be the drainages of Squaw Creek, concentrating animals and resulting in heavy utilization late in the year. As a result, actions to reduce the spring impacts of concentrated cattle use of riparian and upland communities would likely not be successful.

4.3.2 Noxious Weeds

Noted reductions in the health and vigor of desired perennial species, as discussed in section 4.3.1, would also reduce the competitive advantage of perennial speices which precludes establishment and spread of a number of noxious and weedy species. Although a number of noxious weeds have the ability to invade healthy perennial vegetation communities, availability of additional sites of establishment would result in a more rapid spread of those weeds and an increased dominance by less competitive weed species in Rufino Butte and Indian Camp pastures as well as the drainages of Squaw Creek.

4.3.3 Riparian Values

As noted in the purpose and need section of this EA, a number of researchers and/or authors have documented the conclusions that generally the most successful season of livestock use of riparian vegetation communities by grazing animals is spring, when forage of equal or higher quality is available in other communities, when alternate water sources are also present, and when ambient temperatures do not lead livestock to shade provided adjacent to streams and wetlands. As a result, impacts to riparian communities would be expected to increase which a change in the season of use from spring to fall in Simmons Gulch Pasture, especially at the downstream portions of the north and south forks of Squaw Creek in years without fall precipitation as noted in the vegetation analysis above.

Herbaceous and woody growth along banks of streams is important to moderate high flow events, especially during spring run-off. Grazing use of riparian communities in the fall, after opportunities for regrowth are past, often results in unstable banks susceptible to erosion the following spring. Without livestock management actions implemented which retain stubble of herbaceous species and a moderate density of healthy desirable woody species, riparian degradation would likely continue. As a result of the current riparian condition of the north and south forks of Squaw Creek, it is poorly able to support use scheduled in this alternative and would necessitate early removal of cattle from the allotment in many years to meet riparian management objectives.

4.3.4 Livestock Grazing

Although short term one would anticipate grazing capacity within Harper Allotment to not be affected by a change of season of use in Simmons Gulch to fall only, noted long term decline in upland perennial vegetation health and vigor in Rufino Butte and Indian Camp pasture would likely lead to a long term need to reduce grazing authorizations since carrying capacity of the allotment is greatly dependent on dependable forage production in these two pastures.

4.3.5 Wildlife and Fish

Impacts of changing the grazing schedule in Simmons Gulch Pasture to fall only would little affect wildlife and fish species short term, although could have significant negative impacts to habitat resulting from decline in the health and vigor of upland vegetation communities and riparian communities as identified above.

4.3.6 Recreation and Visual Resources

As with other resource values indirectly linked to the condition and trend of vegetation, soil, watershed, and riparian resources, recreation and visual resources would be little effected short-term by a change to fall livestock use in Simmons Gulch Pasture but would be effected long-term.

4.3.7 Wilderness Study Areas

Vegetation, soil watershed, and riparian values negatively impacted long-term with a change in use of Simmons Gulch Pasture to fall only would be primarily outside the boundaries of wilderness study areas. As noted in the vegetation analysis section, the change to annual fall use would remove light to moderate livestock impacts to upland vegetation resources, primarily within the WSA portions of Simmons Gulch Pasture.

4.3.8 Cultural Resources

No Class III cultural resource survey would be required to change the season of authorized cattle use in Simmons Gulch Pasture from spring only to fall only. Any ongoing livestock impacts to historic or prehistoric cultural resources within Simmons Gulch Pasture resulting from authorized livestock use would be likely be unchanged with fall grazing.

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4.4 No Action Alternative

Consequences of implementing the no action alternative, continue the implementation of the 1994 Cooperative Agreement final grazing schedule in Harper Allotment with planned spring use in two of every three years in Simmons Gulch Pasture, would result as summarized in the following sections.

4.4.1 Vegetation, Soils and Watersheds

The no action alternative would not affect upland vegetation resources in ways other than are currently occurring. With responsible livestock management, including appropriate herding of cattle and sheep from areas of heavy and repeated use, upland vegetation objectives would be met and recovery of heavily used areas like Squaw Creek drainage would occur through natural succession. In the absence of appropriate livestock management, upland vegetation communities at best will maintain their condition and may well decline in health and vigor.

The no action alternative would affect soils or watershed values in ways similar to those currently occurring and identified above.

4.4.2 Noxious Weeds

The no action alternative would not change noxious weed distribution or dominance in ways other than are currently occurring. Localized soil disturbance and existing vectors of distribution of noxious weed plant material, including those associated with livestock grazing, would continue and likely accelerate with declining health and vigor of upland and riparian vegetation. The need for continued surveys and localized treatment would continue.

4.4.3 Riparian Values

Recently measured utilization levels of woody riparian species would continue during two of every three years within Simmons Gulch Pasture when livestock use is authorized. Stream-bank stability and riparian function objectives established in the SEORMP would likely not be met when evaluated in association with the soon to be completed Mainstem Malheur Geographic Management Area standards and guidelines assessments.

4.4.4 Livestock Grazing

Livestock management in Harper Allotment would continue as defined in the 1994 Cooperative Agreement, pending completion of assessment of standards and guidelines and evaluation scheduled within the next few years. No change in levels or seasons of livestock use would occur in the short-term. The need for appropriate livestock management actions, especially within the Squaw Creek drainage, would continue to be high-lighted. In the absence of implementation of actions which limit utilization levels of woody riparian species, long term reductions in seasons or levels of livestock use authorized are likely.

4.4.5 Wildlife and Fish

Wildlife habitat values would remain unchanged with no additional direct impacts to wildlife species. Those wildlife and fish habitats in and adjacent to Squaw Creek would continue to provide habitat quality in their current state with limited woody composition and frequent stream-bed and bank movement during high-water events.

4.4.6 Recreation and Visual Resources

The continuation of current livestock management activities would not change current recreation opportunities or visual resources which are summarized in the affected environment section of this EA. The fence-line contract in riparian vegetation, primarily woody species, would continue. Recreation opportunities related to wildlife and fish resources would continue to be impaired due to reduced habitat quality provided by impacted riparian vegetation.

4.4.7 Wilderness Study Areas

The continuation of current livestock management activities would not change the current condition of wilderness values. The grazing schedule identified in the cooperative agreement and livestock management actions implemented currently are not negatively impacting wilderness values. Livestock concentration in the lower drainage of Squaw Creek, outside WSA, has limited livestock use within the WSA portions of Simmons Gulch Pasture.

4.4.8 Cultural Resources

Although no documented impacts to cultural and historic resources are occurring with current management actions, any impacts which may be occurring would continue.

5 Adverse Effects

Unavoidable adverse effects from implementation of the proposed action, alternatives or no action are limited to those impacts to soils, vegetation and riparian function described in the text above.

6 Short Term and Long Term Impacts

Short-term benefits to vegetation and visual resources resulting from livestock exclusion from Simmons Gulch Pasture would extend to long-term benefits upon the return of appropriate livestock management utilizing more resilient browse and forage resources following five years of recovery. Short term loss of spring forage for three livestock operators in four of the next five years would require that alternate forages sources be found. Long term maintenance of the integrity of established grazing schedules identified in the 1994 Harper Allotment Cooperative Agreement would result with the establishment of riparian vegetation adjacent the Squaw Creek which can tolerate scheduled spring use. As a result current livestock grazing levels would be better supported while maintaining resource values.

7 Irreversible or Irretrievable Commitment of Resources

In the event that implementation of the proposed actions does not allow recovery of vegetation resources within the five years identified, although livestock operators would have lost the opportunity to graze within Simmons Gulch Pasture during four of the next five spring periods, no irreversible or irretrievable commitment of resources would be made. Opportunities to further modify livestock management actions to meet riparian management objectives would be maintained, as would opportunities to adjust authorized use to meet other resource management objectives, objectives identified in the SEORMP, or rangeland standards and guidelines which may be impacted by implementation of the proposed action.

8 Mitigating Measures

Based on BLM staff input, the following mitigating actions would be implemented to minimize undesired negative impacts of implementing the proposed action:

- Poorly maintained fences between Simmons Gulch and South Racehorse pasture would be maintained by livestock operators in accordance with terms of cooperative agreements for rangeland projects,
- Livestock compliance checks would be required on a periodic basis during the five years of rest proposed for Simmons Gulch Pasture, especially during periods when adjacent pastures are scheduled for use, to ensure unauthorized livestock grazing does not impede the potential for recovery of woody and herbaceous riparian species.
- Continued periodic measurement of riparian woody species utilization would be desirable to document browsing by native fauna.

9 List of Preparers

Steve Christensen	Rangeland Management Specialist
Bob Alward	Outdoor Recreation Planner, Wilderness
Jean Findley	Botanist
Diane Pritchard	Archaeologist
Shaney Rockefeller	Hydrologist/Soil Specialist
Al Bammann	Wildlife Biologist
Cynthia Tait	Fisheries Biologist
Lynne Silva	Range Technician, Weeds
Jon Freeman	Realty Specialist
Tom Hilken	Planning and Environmental Coordinator
Tom Dabbs	Field Manager, Malheur Resource Area

10 List of Agencies, Organizations, and Persons to Whom Copies of the EA are Made Available:

Livestock operators; Harper Allotment
Hal Shepherd, Northwest Environmental Defense Center
Jon Marvel, Western Watersheds
Oregon Natural Desert Association
Oregon Natural Resources Council
Sierra Club, Oregon Chapter, High Desert Wilderness Committee
Joseph Higgins, Wilderness Watch, Pacific Northwest Office
Stuart Garrett, High Desert Chapter, Native Plant Society of Oregon
Audubon Society of Portland
Doug Heiken, Oregon Natural Resources Council
Mary Scurlock, Pacific River Council
Katie Fite, Committee for Idaho's High Desert
High Desert Wilderness Committee
Greeley Trust

Mark McKenzie
Sam McKenzie
Duncan McKenzie
Mary Ellen Allison
Bill Barnett, Owyhee Outback Ranch
John and Lisa Davis
Larry and Kay Davis
Walt Van Dyke, Oregon Department of Fish and Wildlife
Dean Adams, Tribal Chairperson, Burns Paiute Tribe
Gary Burke, Tribal Chairperson, Confederated Tribes of the Umatilla Reservation
Russ Hursh, Malheur County Court

A file search completed February 6, 2004, identified no additional requests by members of the public to be considered an interested public for Harper Allotment.

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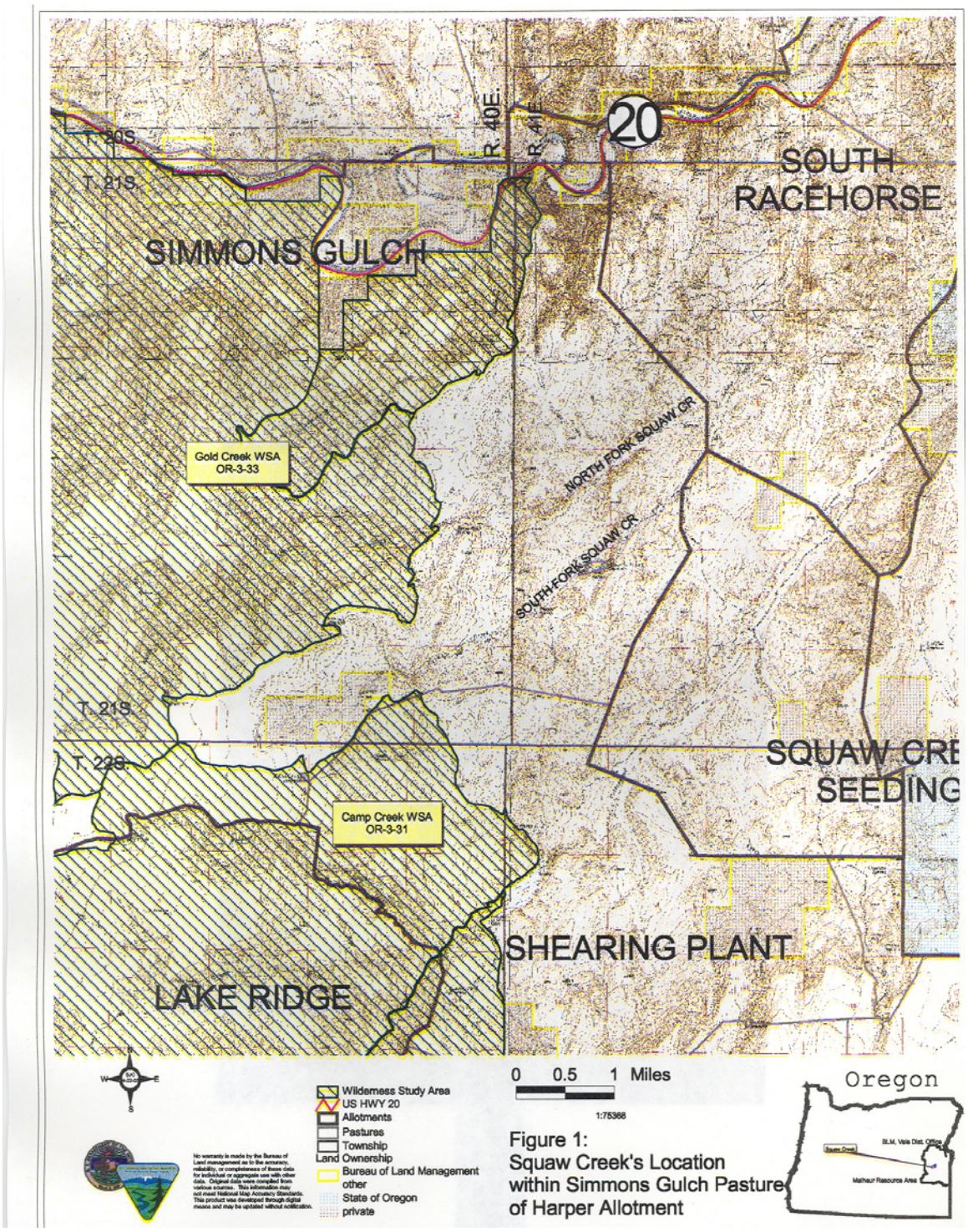
T. 20S.
T. 21S.
R. 40E.
R. 41E.
20
SOUTH RACEHORSE
SIMMONS GULCH
Gold Creek WSA
OR-3-33
NORTH FORK SQUAW CR.
SOUTH FORK SQUAW CR.
T. 21S.
T. 22S.
SQUAW CRE
SEEDING
Camp Creek WSA
OR-3-31
SHEARING PLANT
LAKE RIDGE
Wilderness Study Area
US HWY 20
Allotments
Pastures
Township
Land Ownership
Bureau of Land Management
other
State of Oregon
private
0 0.5 1 Miles
1:75368
Oregon
Figure 1:
Squaw Creek's Location
within Simmons Gulch Pasture
of Harper Allotment

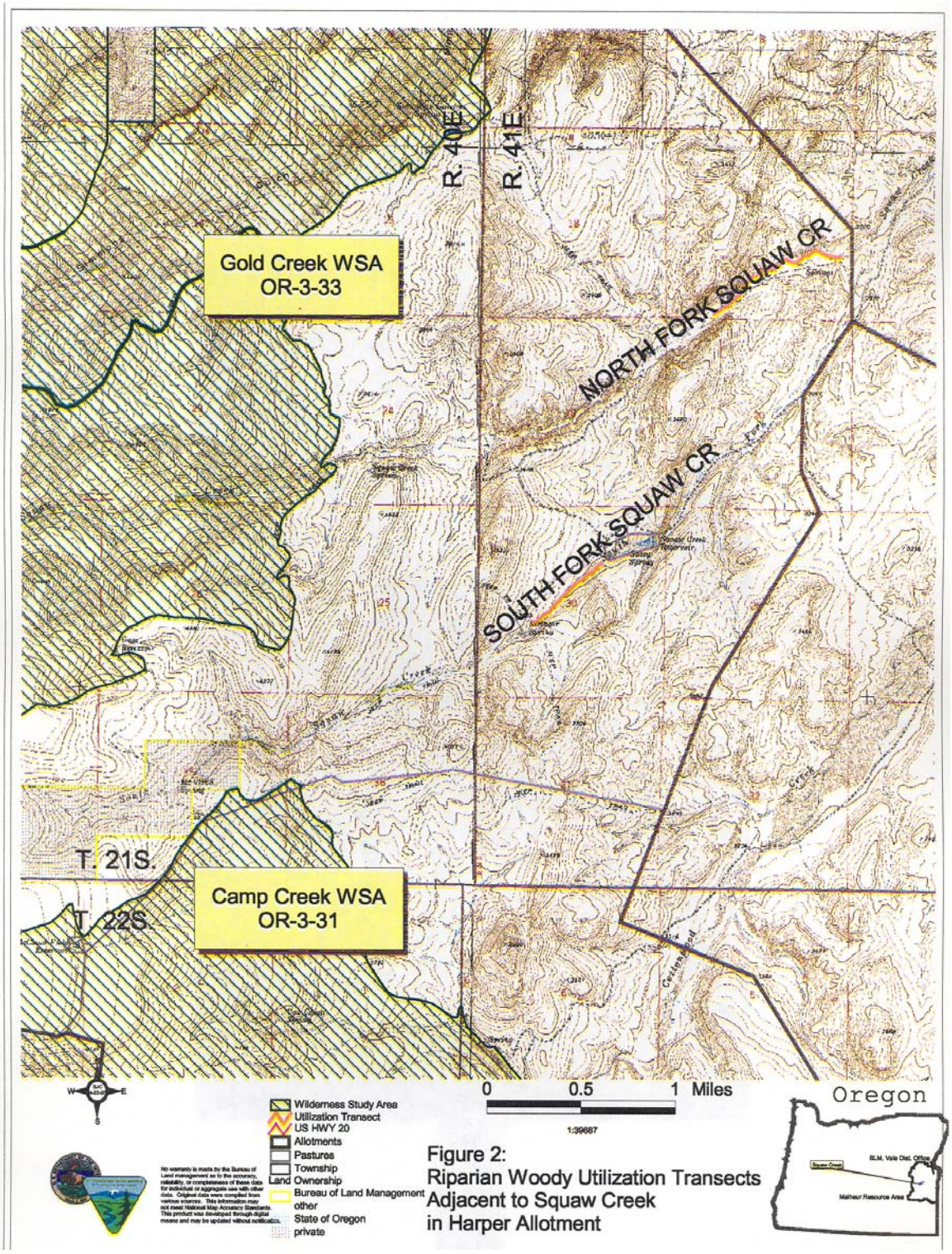

Figure 2:
Riparian Woody Utilization Transects
Adjacent to Squaw Creek
in Harper Allotment

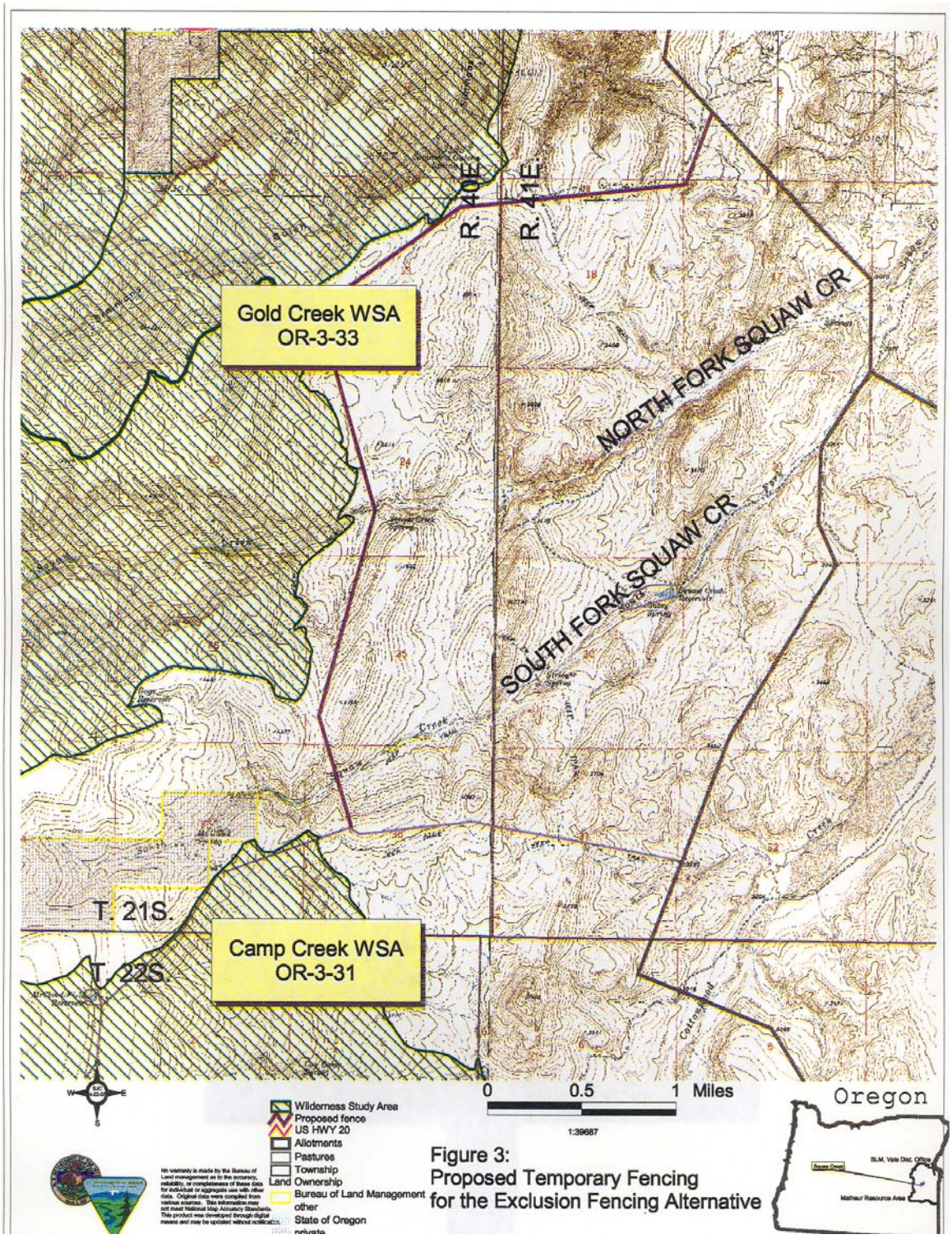

Figure 3:
Proposed Temporary Fencing
for the Exclusion Fencing Alternative